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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/559,414	04/26/2000	Greg Rosenberg	3974-4001	1221

7590 09/21/2004

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EXAMINER	
VAUGHAN, MICHAEL R	

ART UNIT	PAPER NUMBER
2131	

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/559,414	ROSENBERG, GREG	
	Examiner	Art Unit	
	Michael R Vaughan	2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-45 have been full reexamined and are pending.

Response to Amendment

Examiner acknowledges the amendment to the abstract and withdraws the previous objection. As per claim 29, the amendment has rectified the 35 USC §112 rejection.

Response to Arguments

Applicant's arguments with respect to claims 1-45 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC ' 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-4, 8-16, 25-29, 31, 36-40, and 44 are rejected under 35 U.S.C. 103(b) as being unpatentable by Vollert et al, hereinafter Vollert (USP 5,208,858) in view of Ganesan (USP 5,535,276).

As per claim 1, 25, and 36, Vollert teaches a method of signing and authenticating electronic documents comprising securely storing a plurality of private keys associated with a plurality of users in a private key database on a local computer cluster (col. 3, lines 33-40);

receiving at the local computer cluster a signing request transmitted from a first remote computer by a first user (col. 2, lines 3-60; identifying the signing request as one transmitted by the first user (col. 2, lines 65-68), and identifying a signature ready document to be signed (col. 2, lines 5);

retrieving at the local computer cluster the signature ready document to be signed (col. 2, lines 8-10);

signing the signature ready document on the local computer cluster using a complete private key to produce a signed document (col. 2, line 8).

Vollert does not use of a pre-installed add-in software program configure to provide a signed message at the remote computer; therefore the newly added negative limitation is met.

Vollert is silent in expressly disclosing storing private key portions and retrieving at the local computer cluster a private key portion associated with the first user from the private key database generating a complete private key using

the retrieved private key portion if the retrieved private key portion is not a complete private key.

Ganesan teaches:

securely storing a plurality of private key portions associated with a plurality of users in a private key database on a local computer cluster (column 8, lines 11-43 and column);

retrieving at the local computer cluster a private key portion associated with the first user (column 11, lines 29-31) from the private key database generating a complete private key using the retrieved private key portion if the retrieved private key portion is not a complete private key (column 12, lines 45-53). Ganesan teaches that it is advantageous for a trusted third party to maintain one portion of every user's RSA private key (column 3, lines 17-25). This forces the user to interact with a trusted third party, which provides practical advantages such as instant revocation.

In view of this, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the teaching of Ganesan within the system of Vollert because interacting with a trusted third party by allowing it to do the signing improves the overall security of the system to all parties involved. One skilled in the art would have been motivated to generate the claimed invention with a reasonable expectation of success.

As per claim 2, Vollert teaches the private key portion is a complete private key (col. 3, line 35).

As per claim 3, Vollert teaches receiving signing identification credentials from the first user (col. 2, line 63—col. 3, line 14). Vollert fails to teach constructing a complete private key using the private key portion and the received signing identification credentials. Ganesan teaches constructing a complete private key using the private key portion and the received signing identification credentials (column 12, lines 45-65 and column 14, lines 10-40). The examiner supplies to same rationale for the motivation to incorporate the teachings of Ganesan within the system of Vollert as recited in the rejection of claim 1. Vollert teaches sending identification credentials to the server. Furthermore, it would have been obvious to one of ordinary skill in the art to generate the server side of the private key with identifying credentials because it associates the key with the intended user.

As per claim 4, Vollert is silent in disclosing transmitting over the Internet. Vollert does teach a system communicating over a network (col. 1, lines 54-56). In view of this it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Vollert to include communication over the Internet because the Internet is a huge network.

As per claims 8, 26, and 37, Vollert teaches storing the signature ready document in a first document database (col. 2, lines 40-44).

As per claims 9 and 31, Vollert teaches prior to signing: receiving form data from the first remote computer; and modifying the retrieved signature ready document based on the received form data (col. 2, lines 10-11).

As per claims 10 and 27, Vollert teaches the first document database is located on the local cluster (col. 3, line 17).

As per claim 11, Vollert teaches the first document database is located on a secure second remote computer for redundancy (col. 3, lines 16-18).

As per claims 12, 28, and 38, Vollert teaches storing the signed document in a second document database (col. 2, lines 15-16).

As per claims 13 and 29, Vollert teaches the second database is located on a secure second computer remote computer (col. 5, lines 1-5).

As per claim 14, Vollert teaches the second database is located on the local computer cluster (col. 5, lines 1-5).

As per claims 15 and 39, Vollert teaches associating at least one of the signature ready document and the signed document with a document owner (col. 2, lines 10-13).

As per claims 16 and 40, Vollert teaches notifying at least one of document owner and the first user that a signature ready document or a signed document has been signed (col. 2, line 14).

As per claim 44, Vollert teaches the first user is a registered user (col. 2, lines 9-10, 66-68, and col. 3, lines 12-13).

Claims 5-7,17-21, 23, 30, 32-35, 41, 42, 43, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vollert and Ganesan as applied to claims 1 and 17 above, and further in view of Smithies et al (5,544,255).

As per claims 5, 7, 32, Vollert is silent in expressly teaching the use of web browser and hypertext markup languages to send signing request. Smithies teach a commerce system that utilizes the WWW to securely transmit documents with Web browsers using HTML (see col. 41, line 64—col. 43, line 10). The infrastructure on which Smithies bases his system in well known in the art, i.e. the WWW. In view of this it would have been obvious to one of ordinary skill in the art at the time of the invention to employ the teachings of Smithies within the system of Vollert and Ganesan because the Internet is network connecting the world and the main language of communicating is HTML for Web services.

As per claims 6 and 33, Vollert teaches the retrieving at the local computer cluster the signature ready document is automatic (col. 2, lines 5-10).

As per claims 17, 18, 41, and 42, Vollert teaches registering individuals as users, wherein registering includes: verifying and recording the identity of individuals registering including biometric measurements (col. 2, lines 9-10, 66-68, and col. 3, lines 12-13).

Vollert fails to teach associating passwords with the recorded digitized handwritten signatures and the recorded identities; and storing the recorded digitized handwritten signatures, and the recorded identities in an identity database, the identity database being accessible to the local computer cluster. Smithies et al teach digitizing and recording handwritten signatures of individuals registering (column 3, line 35—column 4, lines 58); associating passwords with the recorded digitized handwritten signatures and the recorded identities (column 17, lines 14-21); and storing the recorded digitized handwritten signatures, and the recorded identities in an identity database, the identity database being accessible to the local computer cluster (column 5, lines 5-12). The combined teachings of Vollert and Ganesan rely on a trusted server to perform the authentication process to allow access to a resource such as a document. Ganesan teaches authenticating a user to a trusted server (column 8, lines 33-34). Smithies et al teach a method whereby a user can authenticate himself or herself to a remote computer system, thereby allowing access to a particular

electronic document (column 6, lines 29-44). Smithies et al teach a signature can be transmitted to a remote site for verification before allowing access to a computer system and that the computer system can verify a handwritten signature. Therefore, a handwritten signature is a way in which a computer system can grant authentication to a user who has registered.

In view of this, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the teaching of Smithies et al within the combined system of Vollert and Ganesan because the use of digital handwritten signatures or any biometric measurement is a way that a trusted server can viably authenticate a user. One skilled in the art would have been motivated to generate the claimed invention with a reasonable expectation of success.

As per claims 19 and 43, the Vollert teaches the biometric measurements can determine whether individuals have previously registered. This is an obvious conclusion to using biometric identification to identify a user as taught in col. 3, lines 12-14).

As per claims 20, Vollert teaches the first user is a registered user (col. 2, lines 9-10, 66-68, and col. 3, lines 12-13).

As per claims 21 and 45, Vollert teaches appending a signature to a document but does not teach a digitized handwritten signature. Smithies et al teach appending the first user's digitized signature to the signature ready

document; making a hash of the signature ready document; and encrypting the hash of the signature read), document with the first user's private key (column 20, lines 23-64 and column 13, lines 36-56). The examiner supplies the same rationale for the motivation as recited in the rejection of claim 17 to incorporate the use of a digitized signature as means to authenticate. Smithies et al teach hashing the signature and encrypting the hash with the user's key to further insure that the signed document cannot be altered or duplicated. Therefore, it would be advantageous to take these extra steps to insure the validity of a signed document.

In view of this, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the teaching of Smithies et al within the combined system of Vollert and Ganesan because one would want to protect a signed document from being altered or duplicated. One skilled in the art would have been motivated to generate the claimed invention with a reasonable expectation of success.

As per claim 23, Vollert teaches receiving signing identification credentials from the first user (col. 2, lines 65-68). Vollert fails to teach generating the private key portions for individuals registering, wherein the private key portions can be used with signing identification credentials to construct complete private keys; associating the generated private key portions with the recorded identities of individuals registering storing private key portions in a private key database. Ganesan teaches generating the private key portions for individuals registering,

wherein the private key portions can be used with signing identification credentials to construct complete private keys (column 12, lines 45-65 and column 14, lines 10-40); associating the generated private key portions with the recorded identities of individuals registering (column 14, lines 10-40); and storing private key portions in a private key database (column 8, lines 11-43 and column). The examiner supplies to same rationale for the motivation to incorporate the teachings of Ganesan within the system of Vollert as recited in the rejection of claim 1. Vollert teaches sending identification credentials to the server. Furthermore, it would have been obvious to one of ordinary skill in the art to generate the server side of the private key with identifying credentials because it associates the key with the intended user.

As per claim 30, Vollert teaches the local computer cluster further comprises a second memory device having stored thereon an identity database (col. 3, lines 15-25), the identity database including recorded user identities associated with signatures but is silent in disclosing user digitized handwritten signatures and passwords associated with the user identities. Smithies et al teach the identity database includes user digitized handwritten signatures and passwords associated with the user identities (column 17, lines 14-20). Smithies et al use this teaching in order to organize its users and their respective identifying information so that the system can correctly link and identify a user with his/her data as a way to authenticate. Vollert stores the signed documents in a database with some identifying information but not to the extent that Smithies

et al teach. It would be advantageous to the system of Vollert to provide a more secure means to authenticate a person before the system allows a user to view a signed document. Smithies et al teachings provide such a means.

In view of this, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the teaching of Smithies within the combined system of Vollert and Ganesan because it would allow the system to have a more secure method of authentication. One skilled in the art would have been motivated to generate the claimed invention with a reasonable expectation of success.

As per claim 34, Vollert teaches a registration computer connected to the local computer cluster (col. 2, lines 66-68).

As per claim 35 Vollert teaches registering individuals as users, wherein registering includes: verifying and recording the identity of individuals registering (col. 2, lines 9-10, 66-68, and col. 3, lines 12-13). Vollert fails to teach digitizing and recording handwritten signatures (which is an example of a biometric measurement) of individuals registering; associating passwords with the recorded digitized handwritten signatures and the recorded identities; and storing the recorded digitized handwritten signatures, and the recorded identities in an identity database, the identity database being accessible to the local computer cluster. Smithies et al teach digitizing and recording handwritten signatures of individuals registering (column 3, line 35—column 4, lines 58); associating

passwords with the recorded digitized handwritten signatures and the recorded identities (column 17, lines 14-21); and storing the recorded digitized handwritten signatures, and the recorded identities in an identity database, the identity database being accessible to the local computer cluster (column 5, lines 5-12). The combined teachings of Vollert and Ganesan rely on a trusted server to perform the authentication process to allow access to a resource such as a document. Ganesan teaches authenticating a user to a trusted server (column 8, lines 33-34). Smithies et al teach a method whereby a user can authenticate himself or herself to a remote computer system, thereby allowing access to a particular electronic document (column 6, lines 29-44). Smithies et al teach a signature can be transmitted to a remote site for verification before allowing access to a computer system and that the computer system can verify a handwritten signature. Therefore, a handwritten signature is a way in which a computer system can grant authentication to a user who has registered.

In view of this, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the teaching of Smithies et al within the combined system of Vollert and Ganesan because digital handwritten signature are a way that a trusted server can viably authenticate a user. One skilled in the art would have been motivated to generate the claimed invention with a reasonable expectation of success.

Claims 24 is rejected under 35 U.S.C. 103(b) as being unpatentable by Vollert in view of Smithies.

As per claim 24, Vollert teaches transmitting user identification information and document identification information to the local computer cluster (col. 2, lines 65-66 and col. 2, lines 5-6); transmitting a signing request to the local computer cluster from the remote computer independent of both a private key portion and a public key portion, the signing request requesting the local computer cluster to retrieve the identified document from a second remote computer (col. 2, lines 1-5), obtaining a private encryption key associated with the user from a third computer (col. 2, line 10), and to sign the retrieved document using the obtained private key on a fourth computer, wherein the first, second, third, fourth remote computers can be the same or different computers (col. 2, lines 15-20). Examiner notes that any number of computers and division of duty anticipates the computers disclosed in this claim.

Vollert is silent in disclosing running a browser on the first remote computer and using the browser to connect. Smithies teach a commerce system that utilizes the WWW to securely transmit documents with Web browsers using HTML (see col. 41, line 64—col. 43, line 10). The infrastructure on which Smithies bases his system in well known in the art, i.e. the WWW. In view of this it would have been obvious to one of ordinary skill in the art at the time of the invention to employ the teachings of Smithies within the system of Vollert and

Ganesan because the Internet is network connecting the world and the main language of communicating is HTML for Web services.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vollert, Ganesan, Smithies as applied to claims 1 and 17 above, and further in view of Shin (USP 6,351,634 B1).

As per claim 22, Vollert is silent in disclosing:

associating and storing a secret set of recognition graphics with the passwords in the identity database;

displaying a plurality of recognition graphics, including recognition graphics from the secret set, on the first remote computer;

requesting the first user to select graphics included in the secret set using a non-keyboard selecting device attached to the first remote computer;

receiving a message from the first remote computer identifying the selected graphics;

authorizing access to the local computer cluster if the selected graphics are included in the secret set.

Shin discloses:

associating and storing a secret set of recognition graphics with the passwords in the identity database (column 1, line 60—column 3, line 21);

displaying a plurality of recognition graphics, including recognition graphics from the secret set, on the first remote computer (column 1, line 60—column 3, line 21);

requesting the first user to select graphics included in the secret set using a non-keyboard selecting device attached to the first remote computer (column 1, line 60—column 3, line 21);

receiving a message from the first remote computer identifying the selected graphics (column 1, line 60—column 3, line 21);

authorizing access to the local computer cluster if the selected graphics are included in the secret set (column 1, line 60—column 3, line 21).

Shin teaches that his method of authentication is better than methods using just keypad data entries. He suggests it is harder for someone to gain knowledge of a secret symbol than gaining knowledge of keypad alphanumeric passwords. Therefore, it would be advantageous to the overall security of the system is authentication was assisted by determining secret symbols as opposed to just alphanumeric passwords.

In view of this, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the teaching of Shin within the combined system of Vollert and Ganesan and Smithies et al because it would allow the system to have a more secure method of authentication. One skilled in the art would have been motivated to generate the claimed invention with a reasonable expectation of success.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael R Vaughan whose telephone number is 703-305-0354. The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 703-305-9648. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael R Vaughan
Examiner
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